

What is claimed is:

1. A power processing device comprising:

a) a multilayer printed circuit board having multiple layers of dielectric sheets;

b) a first transformer having,

1) a first core extending through said layers of dielectric sheets, and,

2) a first set of electrically conductive windings, at least one of said windings of said first set of electrically conductive windings contained between two adjoining layers of said dielectric sheets;

c) a second transformer having,

1) a second core extending through said layers of dielectric sheets, and,

2) a second set of electrically conductive windings, at least one of said windings of said second set of electrically conductive windings contained between two adjoining layers of said dielectric sheets; and,

d) at least one electrically conductive trace extending between said first set of electrically conductive windings and said second set of electrically conductive windings, said at least one electrically conductive trace ~~totally~~ contained between two adjoining layers of said dielectric sheets.

2. The power processing device according to claim 1, further including a first shielding layer disposed on a first exterior surface of said multilayer printed circuit board above said first set of windings.

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3. The power processing device according to claim 2, further including a second shielding layer disposed on a second exterior surface of said multilayer printed circuit board below said first set of windings.

1 4. The power processing device according to claim 1, wherein said first set of electrically  
2 conductive windings and the second set of electrically conductive windings are electrically  
3 encapsulated.

1 5. The power processing device according to claim 4, wherein said at least one electrically  
2 conductive trace is electrically encapsulated.

1 6. The power processing device according to claim 1,  
2 a) wherein said first set of electrically conductive windings include quiet windings; and,  
3 b) wherein said first transformer further includes a secondary set of windings positioned to  
4 have electrical flow induced therein by said first core, said secondary set of windings positioned  
5 proximate to said quiet windings.

1 7. The power processing device according to claim 1,  
2 a) wherein said first transformer further includes a secondary set of windings positioned to  
3 have electrical flow induced therein by said first core; and,  
4 b) further including an open loop positioned to inject a current through parasitic  
5 capacitance in said secondary windings having a polarity opposite that of current in said first set

6 of windings.

1 8. The power processing device according to claim 1,

2 a) wherein said first transformer further includes a secondary set of windings positioned to  
3 have electrical flow induced therein by said first core; and,

4 b) further including an open loop positioned proximate and on a second side of said  
5 secondary windings.

1 9. The power processing device according to claim 1,

2 a) wherein said first transformer includes a secondary winding;

3 b) wherein said second transformer includes a secondary winding;

4 c) wherein the secondary winding of said first transformer and the secondary winding of  
5 said second transformer are electrically connected in parallel; and,

6 d) wherein the first set of electrically conductive windings and the second set of  
7 electrically conductive windings are electrically connected in series.

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10. A power processing device comprising:

a) a multilayer printed circuit board having multiple layers of dielectric sheets;

b) a transformer having,

1) a core extending through said layers of dielectric sheets, and,

2) a first set of electrically conductive windings, at least one of said windings of said first set of electrically conductive windings contained between two adjoining layers of said dielectric sheets; and,

c) a first shielding layer disposed on a first exterior surface of said multilayer printed circuit board above said first set of windings.

11. The power processing device according to claim 10, further including a second shielding layer disposed on a second exterior surface of said multilayer printed circuit board below said first set of windings.

12. The power processing device according to claim 11, further including an electrically conductive trace contained between two layers of said dielectric sheets, said conductive trace communicating with said first set of electrically conductive windings.

13. The power processing device according to claim 10, further including:

a) a set of quiet windings contained within said first set of windings; and,

b) a secondary set of windings positioned to have electrical flow induced therein by said

4 core, said secondary set of windings positioned proximate to said quiet windings.

1 14. The power processing device according to claim 10, further including:

2 a) a secondary set of windings positioned to have electrical flow induced therein by said

3 core; and,

4 b) an open loop positioned to inject a current through parasitic capacitance in said

5 secondary windings, said injected current having a polarity opposite that of current in said first set

6 of windings.

1 15. The power processing device according to claim 10, further including:

2 a) a secondary set of windings positioned to have electrical flow induced therein by said

3 core; and,

4 b) further including an open loop positioned proximate and on a second side of said

5 secondary windings.

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